Whitehall
WHIRLPOOL
SINCE 1946

EXCELLENCE IN HYDROTHERAPY

P-10-M-SDP

H-105-M

MOBILE WHIRLPOOL
OPERATION AND MAINTENANCE MANUAL

6900-195-000 June 2014

WARNING

PLEASE READ THIS ENTIRE BOOKLET BEFORE OPERATING YOUR NEW WHIRLPOOL

Failure to follow these instructions could result in damage to your new whirlpool and/or bodily injury

European Union CE Mark

The presence of the CE Mark on Whitehall equipment means that it has been designed, tested and certified as complying with all applicable European Union regulations and recommendations.

Waste Electrical and Electronic Equipment (WEEE)

This s ymbol on the product or on its packaging indicates that this product must not be disposed of with regular waste. Instead, it is the user's responsibility to dispose of waste equipment according to the local laws. Separate collection and recyc ling of the waste equipment at the time of dispos al will help conserve natural resources and ensure it is recycled in a manner that protects human health and the environment. For information about where the user can drop off the waste equipment for recycling, please contact your local waste collection authority. See Page 20 for instructions on how to disassemble the equipment for recyc ling purposes.

General Warning or Caution

The Exclamation Symbol appears in Warning and Caution statements. This symbol designates where personal injury or damage to the equipment is possible.

Electric Shock

The Electric Shock Symbol is us ed to indicate a hazard arising from dangerous v oltage. Any mishandling could result in irreparable damage to the equipment and/or personal injury or death.

	WARNING To avoid electric shock, connect the instrument to properly earth-grounded, GFCI protected, 3-prong receptacles only. Failure to observe this precaution can result in severe injury.

Ÿ WHIRLPOOLS intended for professional use only.

Ÿ 220v WHIRLPOOLS for export only.

Ÿ DO NOT operate appliance without properly filling with water. Under no conditions should the appliance be operated without water. Fill appliance with water to the prescribed level before plugging into an electrical receptacle. Operating the appliance without water may result in damage to the motor.

Ÿ IMPROPER USE of the whirlpool can cause injury. Use the whirlpool only for the purpose described in this manual.

Ÿ THE TURBINE is top-heavy. Improper handling can cause injury or damage. Handle the turbine with care.

Ÿ ATTACHING IMPROPER items to the whirlpool can cause injury to persons and damage to equipment. Use only Whitehall approved items on the whirlpools.

Ÿ INCORRECT PARTS and service can cause injury to persons and damage equipment. Use only Whitehall parts and Whitehall approved service on whirlpools.

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OPERATOR SKILLS AND TRAINING

Skills:

Operators using the whirlpool need:

Ÿ a working knowledge of aquatic physical-therapy procedures.

Ÿ the ability to assist the patient.

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel should operate the whirlpool.

TRAINING

Operator trainees need to:

Ÿ be trained in aquatic-therapy protocols.

Ÿ be familiar with the types of patients who should or should not receive this type of physical therapy (see Patient Evaluation, below).

Ÿ read and understand this manual (and the manual for the turbine, if used).

Ÿ be trained on the use of the whirlpool (and turbine, if used).

Ÿ practice with the whirlpool (and turbine, if used) before use with patient.

PATIENT EVALUATION

Require Each Patient To Be Evaluated

Patients who are electrically-susceptible (patients with exposed, non-waterproof electric leads, monitors, etc.), patients carrying infectious disease, or patients with certain other medical, mental or physical conditions should not receive treatment with the whirlpool.

The trained operator must evaluate and verify that each patient is suitable for hydrotherapy treatment before permitting the patient to begin hydrotherapy. If in doubt, consult a medical professional before providing hydrotherapy treatment.

⚠ WARNING

Certain medical conditions are incompatible with hydrotherapy. The trained operator is responsible for determining each user's suitability for hydrotherapy before beginning treatment.

Important

BLOODBORNE DISEASE NOTICE: To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the whirlpool, read and follow the disinfecting and cleaning instructions in this manual thoroughly.

INSPECTING THE WHIRLPOOL

This Whitehall product has been carefully packaged at the factory to minimize the possibility of damage during shipping.

— Inspect the packaging for external signs of damage.
— Inspect the contents for damage.

If there is visible damage to the instrument upon receipt, inform the shipping company and Whitehall immediately.

⚠ WARNING

Do not attempt to operate this equipment if there is evidence of shipping damage or you suspect the unit is damaged. Damaged equipment may present additional hazards to you. Contact Whitehall technical support for advice before attempting to plug in and operate damaged equipment.

Have your facility's equipment maintenance personnel inspect the whirlpool regularly. Follow the checklist at right and operate the whirlpool through all its functions as described in this manual.

Inspection Checklist

Ÿ Are all components present?

Ÿ Is the whirlpool free of excessive wear?

Ÿ Does the turbine mount securely in place?

Ÿ Is a properly-grounded and voltage-matched hospital grade receptacle available for the turbine?

Ÿ Is the outlet or turbine cord equipped with a functioning GFI (or RCD)?

Ÿ Can the turbine be raised, lowered and locked at the desired height?

Ÿ Does the drain valve open and close properly?

Ÿ Is the thermometer present and is it legible?

Ÿ Do the installed accessories operate without interfering with whirlpool use or turbine operation?

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USING THE WHIRLPOOL

Before Placing the Whirlpool In Service:

Operators using the whirlpool need:

Ÿ Personnel who will work with the whirlpool need to read this manual.

Ÿ Have a plumbing professional install the whirlpool as instructed in Installing the Whirlpool, page 4. A rough-in drawing is available to assist the installer. Contact Whitehall Customer Service, bottom of page, for additional installation not covered in this manual.

Ÿ Confirm that the whirlpool operates properly. See Inspecting the Whirlpool , page 2.

General Guidelines for Use:

Ÿ Medical advice is beyond the parameters of this manual.

Ÿ The whirlpool is for professional use only. A minimum of one trained operator is required.

Ÿ The trained operator must evaluate and verify that the patient is suitable for hydrotherapy treatment before beginning hydrotherapy with whirlpool. See Patient Evaluation, page 2.

Ÿ Follow your state and local hydrotherapy procedures and, if the patient has one, the physician's order for treatment (see Patient Evaluation, page 2).

Ÿ Stay with patient at all times.

Ÿ It is the operators responsibility to ensure safe practices for the patient and themselves.

Ÿ If a turbine is used:

Plug the turbine cord only into a receptacle that is voltage-matched, properly grounded and polarized. Verify that the receptacle has GFI protection or order a GFCI plug for the turbine cord.

Keep patient hair, gown strings and other loose items away from the impeller housing to avoid entanglement and injury.

Keep the area around the turbine clear. The turbine requires a minimum of 24" (610mm) of clearance.

⚠ WARNING

Certain medical conditions are incompatible with hydrotherapy. The trained operator is responsible for determining each user's suitability for hydrotherapy before beginning treatment.

Improper operation can cause injury. Operate the whirlpool only as described in this manual.

An unattended patient can be injured. Stay with patient at all times.

Loose items such as gown straps or gauze can be pulled into the turbine impeller and cause injury. Keep loose items away from the turbine impeller housing.

Important

Communicate with patient at all times. If a turbine is used, tell the patient before starting or stopping the turbine and before changing the water or aeration level.

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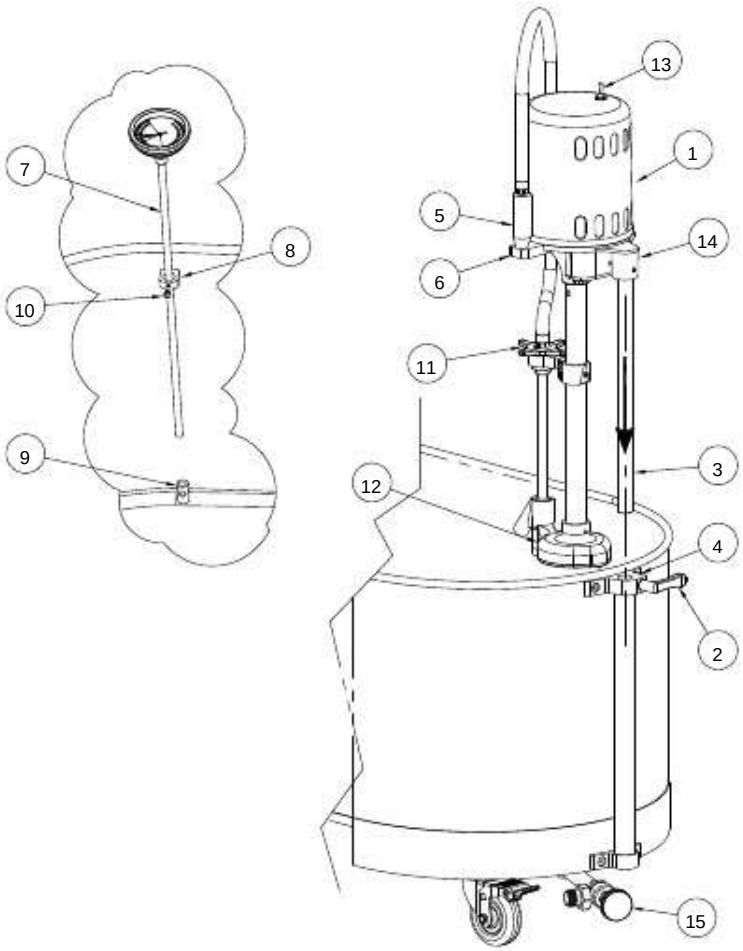
NOTE: THESE INSTALLATION INSTRUCTIONS ARE USED FOR ALL WHITEHALL OR DAKON MOBILE AND -SL MODELS 27 GALLONS OR MORE.

REFERENCE DRAWINGS	
ASSEMBLIESPAGE NUMBER	
	5MOTOR/TURBINE
	11RAISING/LOWERING/SHELF/LG
	12RAISING/LOWERING/NO SHELF
	13DRAIN ELBOW/VALVE
	14CASTERS
	15THERMOMETER



ASSEMBLY PROCEDURE:

A- TO INSTALL MOTOR/TURBINE ASSEMBLY 1 , LOOSEN HANDLE 2 AND ALIGN AND ENGAGE MOTOR SUPPORT ROD 3 WITH RAISING AND LOWERING ASSEMBLY 4 . TIGHTEN LEVER HANDLE 2 . NOTE: INTERNAL BUSHING MAY NEED ADJUSTING.

B- PLACE DISCHARGE NOZZLE 5 INTO STORAGE SOCKET 6 PROVIDED.

C- TO INSTALL THERMOMETER; THREAD SENSING ROD 7 THRU UPPER BRACKET 8 AND INTO LOWER BRACKET 9 BEFORE TIGHTENING SCREW 10 .

D- TURN THE PRESSURE CONTROL VALVE HANDLE 11 FULLY CLOCKWISE, THEN FULLY COUNTERCLOCKWISE TO COMPLETELY LUBRICATE THE PLUNGER ASSEMBLY.

E- PROVIDE ELECTRICAL SERVICE AND PROPERLY INSTALLED, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FOR MOTOR SPECIFIED. MOTOR SPECIFICATIONS AVAILABLE ARE EITHER 120V AC / 60 HZ ON 15A CIRCUIT OR 240 V AC / 50 HZ ON 10A CIRCUIT.

⚠ WARNING

Turbine assembly is provided with a 3-way plug. The third prong functions as a built-in ground and must be plugged into a matching grounded receptacle to properly ground the product.

OPERATION:

A- FILL TUB AS DESIRED USING 3/4" NPS X 60" LONG FILLER HOSE PROVIDED. WATER LEVEL SHOULD BE A MAXIMUM OF 4" BELOW THE RIM AND A MINIMUM OF 6" ABOVE BOTTOM OF PUMP 12 .

B- TURN THE PRESSURE CONTROL VALVE HANDLE 11 FULLY CLOCKWISE. THIS PROVIDES MAXIMUM PRESSURE AND AGITATION.

C- TURN ON THE SWITCH 13 .

D- ADJUST RAISING AND LOWERING ASSEMBLY 4 BY SLOWLY PUSHING DOWN ON THE TOP OF THE MOTOR SUPPORT CASTING 14 UNTIL THE PUMP 12 IS AT THE DESIRED LOCATION AND TIGHTEN HANDLE 2 TO FIX.

E- ADJUST PRESSURE CONTROL VALVE HANDLE 11 TO DELIVER DESIRED LEVEL OF AGITATION AND PRESSURE.

DRAINING PROCEDURE:

A- IF A FLOOR DRAIN IS AVAILABLE USE THE DRAIN VALVE 15 LOCATED AT THE BOTTOM OF THE TUB.

B- IF EMPTYING INTO A SINK, ROTATE PRESSURE CONTROL VALVE HANDLE 11 COUNTER-CLOCKWISE, LOWER THE PUMP 12 TO THE BOTTOM OF THE TUB. PLACE DISCHARGE NOZZLE 5 INTO INTO SINK, TURN ON SWITCH 13 (NOTE: WHEN WATER STOPS DISCHARGING FROM THE NOZZLE, TURN OFF THE SWITCH). DRAIN RESIDUAL WATER USING DRAIN VALVE 15 OR DRY SPONGE.

C- ON WHITEHALL -DS OPTION AND DAKON DS MODELS, LOOSEN THE HANDLE 2 AND PUSH THE TURBINE ASSEMBLY 1 DOWN SO THAT THE PUMP 12 IS IN THE WATER ACCUMULATOR. TURN THE PRESSURE CONTROL VALVE HANDLE 11 FULLY COUNTER-CLOCKWISE TO EVACUATE THE WATER. PLACE THE HOSE NOZZLE 5 INTO A SINK OR DRAIN AND TURN ON SWITCH 13 . AFTER WATER HAS EVACUATED, RAISE THE MOTOR/ TURBINE ASSEMBLY 1 AND REMOVE RESIDUAL WATER WITH A TOWEL OR SPONGE.

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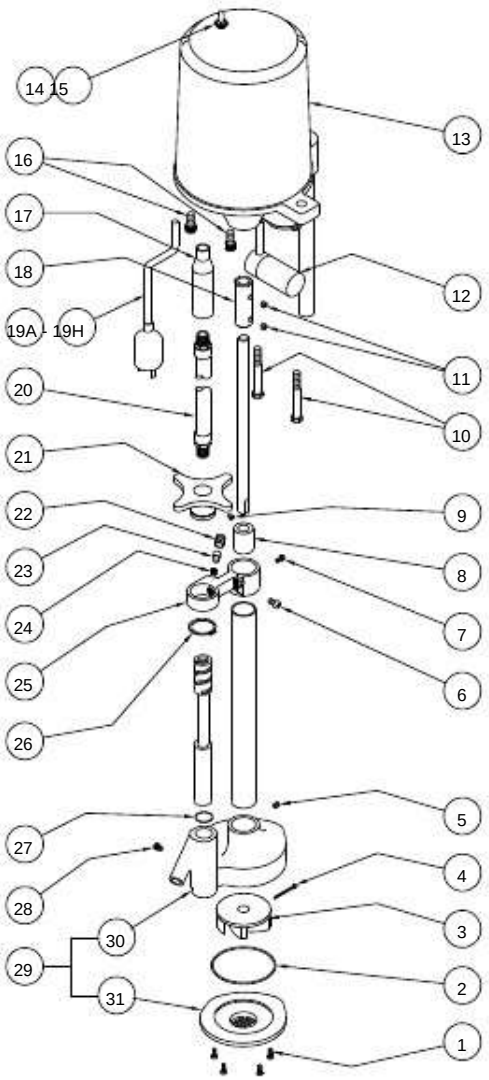
THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:			
WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS	WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-15-M		L-90-M	
E-15-M-DS	DS-2516	L-90-M-DS	DS-6018
E-15-MU		L-105-M	
E-22-M		L-105-M-DS	DS-6618
E-22-M-DS		P-10-M	
E-22-MU	DS-2818	P-10-MH	
E-27-M		P-10-MU	
E-27-M-DS		P-15-M	
E-36-M	DS-2821	P-15-M-DS	
E-36-M-DS		P-15-MH	DS-2516
E-45-M		P-15-MU	
E-45-M-DS	DS-2825	P-22-M	
H-60-M		P-22-M-DS	
H-60-M-DS		S-85-M	
H-75-M		S-85-M-DS	DS-2818
H-90-M	DS-3628	S-85-SL	DST-4825
H-90-M-DS		S-90-M	
H-105-M		S-90-M-DS	
H-105-M-DS		S-90-SL	
L-75-M		S-110-M	
L-75-M-DS	DST-4828	S-110-M-DS	
L-75-SL	DS-4828	S-110-SL	
			DST-5625

NOTE: SEE ADDITIONAL DRAWINGS FOR COMPLETE ASSEMBLY NUMBERS AND DETAIL OF ITEMS NOT LISTED.

ASSEMBLIES	PAGE
MOBILE "E" SERIES	6
MOBILE "H" SERIES	7
MOBILE "L" SERIES	8
MOBILE "P" SERIES	9
MOBILE "S" SERIES	10



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	6502-307-000	#8-32 x 1/2" PHIL FLAT HD SELF TAPPING	19B	6505-034-001	DOMESTIC POWER CORD 220VAC, 60Hz
2	6504-501-199	17" PUMP GASKET	19C	6505-044-001	RUSSIAN POWER CORD, 250VAC, 50Hz
3	6525-518-000	TURBINE IMPELLER - PLASTIC	19D	6505-074-001	INDIA/S. AFRICA POWER CORD, 230VAC, 50Hz
4	0341-101-000	COTTER PIN	19E	6505-043-001	EUROPEAN POWER CORD, 250VAC, 50Hz
5	6502-401-000	1/4" -20 x 5/16" HEX SCKT SET SCREW	19F	6505-073-001	UK POWER CORD, 230VAC, 50Hz
6	6502-042-000	1/4" -20 x 5/8" PHIL PAN HEAD SCREW	19G	6505-070-001	ISRAEL POWER CORD, 250VAC, 50Hz
7	6502-300-000	#8-32 x 3/8" PHIL FLAT HD SELF TAPPING	19H	6505-071-001	AUSTRALIAN POWER CORD, 250VAC, 50Hz
8	6525-514-199	SHAFT BEARING	20	6525-590-001	DISCHARGE HOSE ASSEMBLY
9	6502-410-000	1/4"-20 x 1/4" DOG SET SCREW	21	6525-584-199	HANDLE
10	6502-352-000	3/8"-16 x 3" HEX HEAD CAP SCREW	22	6531-112-199	TENSION ADJUSTER
11	6502-402-000	5/16"-18 x 1/4" HEX SOCKET SET SCREW	23	6531-111-199	FRICTION LOCK ROD
12	6502-020-001	CONDENSER ASSEMBLY	24	6531-113-000	SPRING
13	6525-600-000	PLASTIC MOTOR COVER	25	6525-570-199	AIR RING BRACKET
14	6505-025-000	DPST TOGGLE SWITCH	26	6502-620-000	1-3/8" RETAINING RING
15	6505-035-000	WATERPROOF TOGGLE SWITCH CAP	27	6504-022-000	O-RING
16	6502-452-000	3/8"-16 x 3/4" HEX SOCKET CAP SCREW	28	6502-413-000	1/4"-20 x 5/16" DOG SET SCREW
17	6525-590-199	HOSE END	29	6525-509-001	PUMP BODY / COVER ASSEMBLY
18	6525-513-199	SHAFT COUPLING	30	6525-511-199	PUMP COVER
19A	6505-030-000	10 FEET, 115VAC, 60Hz POWER CORD	31	6525-510-199	PUMP BODY

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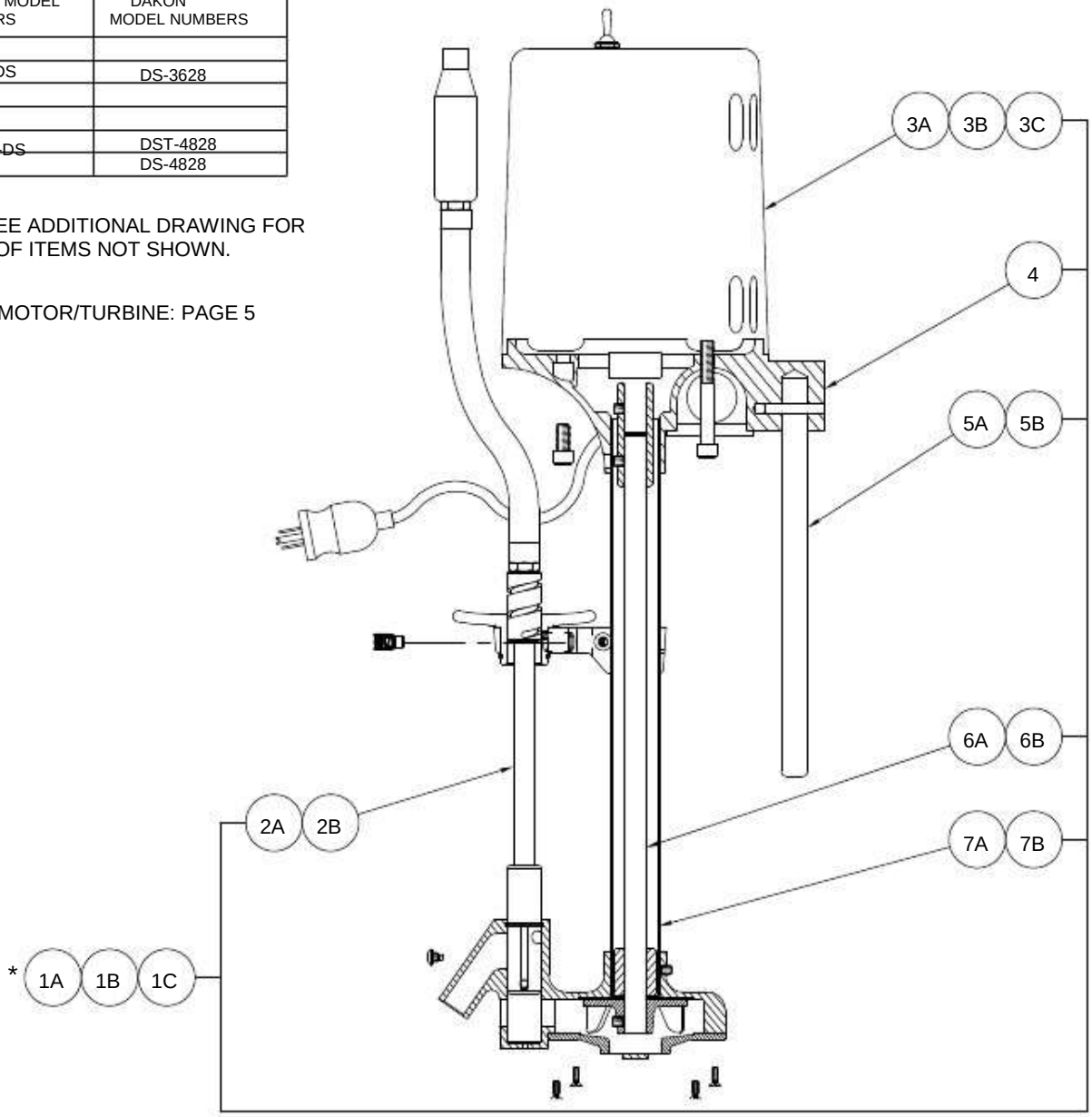
WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
H-60-M	
H-60-M-DS	DS-3628
H-75-M	
H-90-M	
H-105-M	
H-105-M-DS	DST-4828
	DS-4828

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

MOBILE MOTOR/TURBINE: PAGE 5



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-068-001	TURBINE ASSY - H-60/70/90/105 - 115VAC, 60Hz	46525-500-299		1" MOTOR BASE CASTING R & L
1B	6525-069-001	TURBINE ASSY - H-60/70/90/105 - 230VAC, 60Hz	5A6509-170-199		1" DIA. x 25-1/2" ROD - H-60/70/90/105-M
1C	6525-070-001	TURBINE ASSY - H-60/70/90/105 - 230VAC, 50Hz	5B6509-165-199		1" DIA. x 23-1/2" ROD - H-60/105-M-DS
2A	6525-568-001	PLUNGER ASSY - 23-1/4" - H-60/75/90/105-M	6A6509-530-199		IMPELLER SHAFT - 29-3/8" - H-60/75/90/105-M
2B	6525-569-001	PLUNGER ASSY - 20-1/4" - H-60/105-M-DS	6B6509-535-199		IMPELLER SHAFT - 29-3/8" - H-60/105-M-DS
3A	6525-200-001	MOTOR ASSY - 115VAC, 60Hz	7A6509-130-199		IMPELLER TUBE - 28-1/2" - H-60/70/90/105-M
3B	6525-210-001	MOTOR ASSY - 230VAC, 60Hz	7B6509-135-199		IMPELLER TUBE - 30" - H-60/105-M-DS
3C	6525-220-001	MOTOR ASSY - 230VAC, 50Hz			

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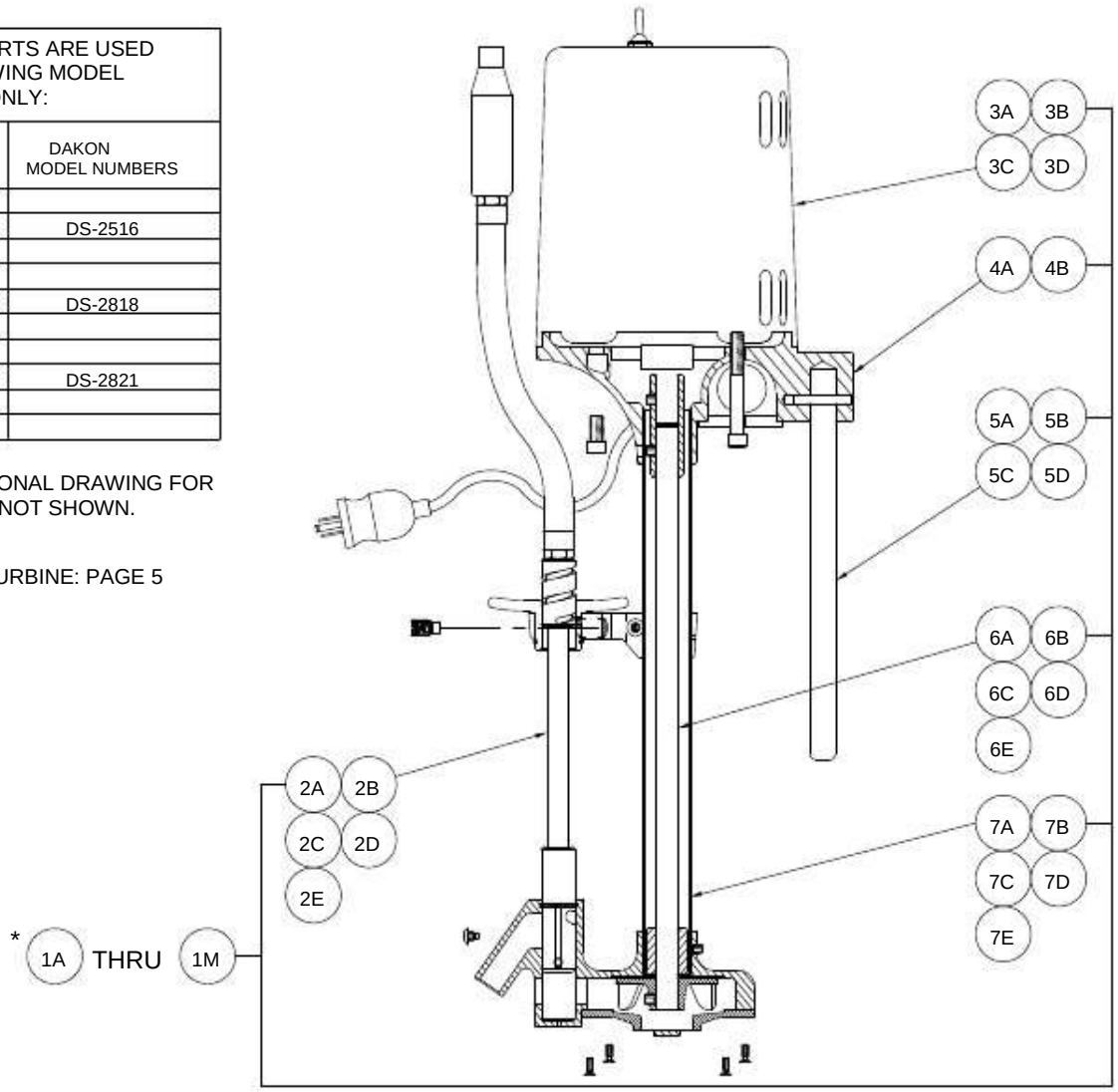
E-15-M	
E-15-M-DS	DS-2516
E-15-MU	
E-22-M	
E-22-M-DS	
E-22-MU	DS-2818
E-27-M	
E-27-M-DS	
E-45-M	DS-2821
E-45-M-DS	

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

MOBILE MOTOR/TURBINE: PAGE 5



ITEM PART NUMBER	DESCRIPTION	ITEM PART NUMBER	DESCRIPTION
1A6525-005-001	TURBINE ASSY - E-15 - 115VAC, 60Hz	3C6525-220-001	MOTOR ASSY - 230VAC, 50Hz, - E-15/22/27/45
1B6525-006-001	TURBINE ASSY - E-15 - 230VAC, 60Hz	3D6525-200-001	MOTOR ASSY - 115VAC, 60Hz, - E-27/45
1C6525-007-001	TURBINE ASSY - E-15 - 230VAC, 50Hz	4A6525-500-199	3/4" MOTOR BASE CASTING - E-15/22
1D6525-008-001	TURBINE ASSY - E-22 - 115VAC, 60Hz	4B6525-500-299	1" MOTOR BASE CASTING - E-27/45
1E6525-009-001	TURBINE ASSY - E-22 - 230VAC, 60Hz	5A6509-560-199	3/4" DIA. x 13" ROD - E-15
1F6525-010-001	TURBINE ASSY - E-22 - 230VAC, 50Hz	5B6509-565-199	3/4" DIA. x 16" ROD - E-22
1G6525-061-001	TURBINE ASSY - E-27 - 115VAC, 60Hz	5C6509-160-199	1" DIA. x 21-1/4" ROD - E-27
1H6525-062-001	TURBINE ASSY - E-27 - 230VAC, 60Hz	5D6509-165-199	1" DIA. x 23-1/2" ROD - E-45
1J6525-063-001	TURBINE ASSY - E-27 - 230VAC, 50Hz	6A6509-510-199	IMPELLER SHAFT - 16-1/8" - E-15
1K6525-071-001	TURBINE ASSY - E-45 - 115VAC, 60Hz	6B6509-515-199	IMPELLER SHAFT - 19-1/8" - E-15-M-DS, E-22-M
1L6525-072-001	TURBINE ASSY - E-45 - 230VAC, 60Hz	6C6509-250-199	IMPELLER SHAFT - 22-1/8" - E-22-M-DS, E-27-M
1M6525-072-001	TURBINE ASSY - E-45 - 230VAC, 50Hz	6D6509-525-199	IMPELLER SHAFT - 26-3/8" - E-27-M-DS, E-45-M
2A6525-555-001	PLUNGER ASSY - 12" - E-15-M	6E6509-530-199	IMPELLER SHAFT - 29-3/8" - E-45-M-DS
2B6525-558-001	PLUNGER ASSY - 15-1/4" - E-15-M-DS, E-22-M	7A6509-110-199	IMPELLER TUBE - 15-1/4" - E-15
2C6525-561-001	PLUNGER ASSY - 16-1/4" - E-22-M-DS, E-27-M	7B6509-115-199	IMPELLER TUBE - 18-1/4" - E-15-M-DS, E-22-M
2D6525-565-001	PLUNGER ASSY - 20" - E-27-M-DS, E-45-M	7C6509-120-199	IMPELLER TUBE - 21-1/4" - E-22-M-DS, E-27-M
2E6525-568-001	PLUNGER ASSY - 23-1/4" - E-45-M-DS	7D6509-125-199	IMPELLER TUBE - 25-1/2" - E-27-M-DS, E-45-M
3A6525-201-001	MOTOR ASSY - 115VAC, 60Hz, - E-15/22	7E6509-130-199	IMPELLER TUBE - 28-1/2" - E-45-M-DS
3B6525-210-001	MOTOR ASSY - 230VAC, 60Hz, - E-15/22/27/45		

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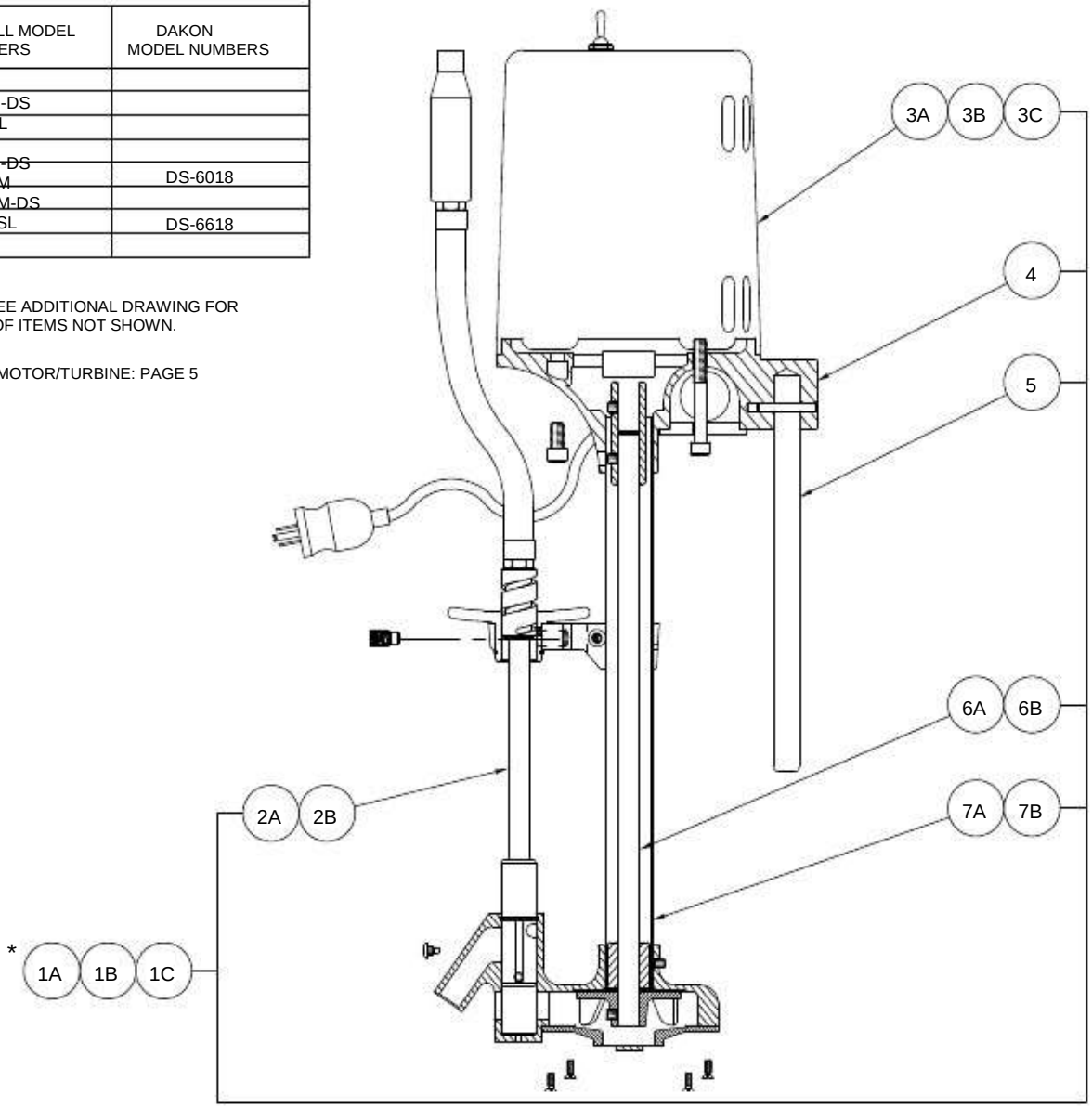
L-75-M	
L-75-M-DS	
L-75-SL	
L-90-M	
L-90-M-DS	
L-105-M	DS-6018
L-105-M-DS	
L-105-SL	DS-6618

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

MOBILE MOTOR/TURBINE: PAGE 5



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-058-001	TURBINE ASSY - L-75/90/105 - 115VAC, 60Hz	3C	6525-220-001	MOTOR ASSY - 230VAC, 50Hz
1B	6525-059-001	TURBINE ASSY - L-75/90/105 - 230VAC, 60Hz		46525-500-299	1" MOTOR BASE CASTING
1C	6525-060-001	TURBINE ASSY - L-75/90/105 - 230VAC, 50Hz		56509-155-199	1" DIA. 16-1/2" ROD
2A	6525-558-001	PLUNGER ASSY - 15-1/4" - L-75/90/105-M-SL	6A	6509-515-199	IMPELLER SHAFT - 19-1/8" - L-75/90/105-M-SL
2B	6525-561-001	PLUNGER ASSY - 16-1/2" - L-75/90/105-M-DS	6B	6509-520-199	IMPELLER SHAFT - 22-1/8" - L-75/90/105-M-DS
3A	6525-200-001	MOTOR ASSY - 115VAC, 60Hz	7A	6509-115-199	IMPELLER TUBE - 18-1/4" - L-75/90/105-M-SL
3B	6525-210-001	MOTOR ASSY - 230VAC, 60Hz	7B	6509-120-199	IMPELLER TUBE - 21-1/4" - L-75/90/105-M-DS

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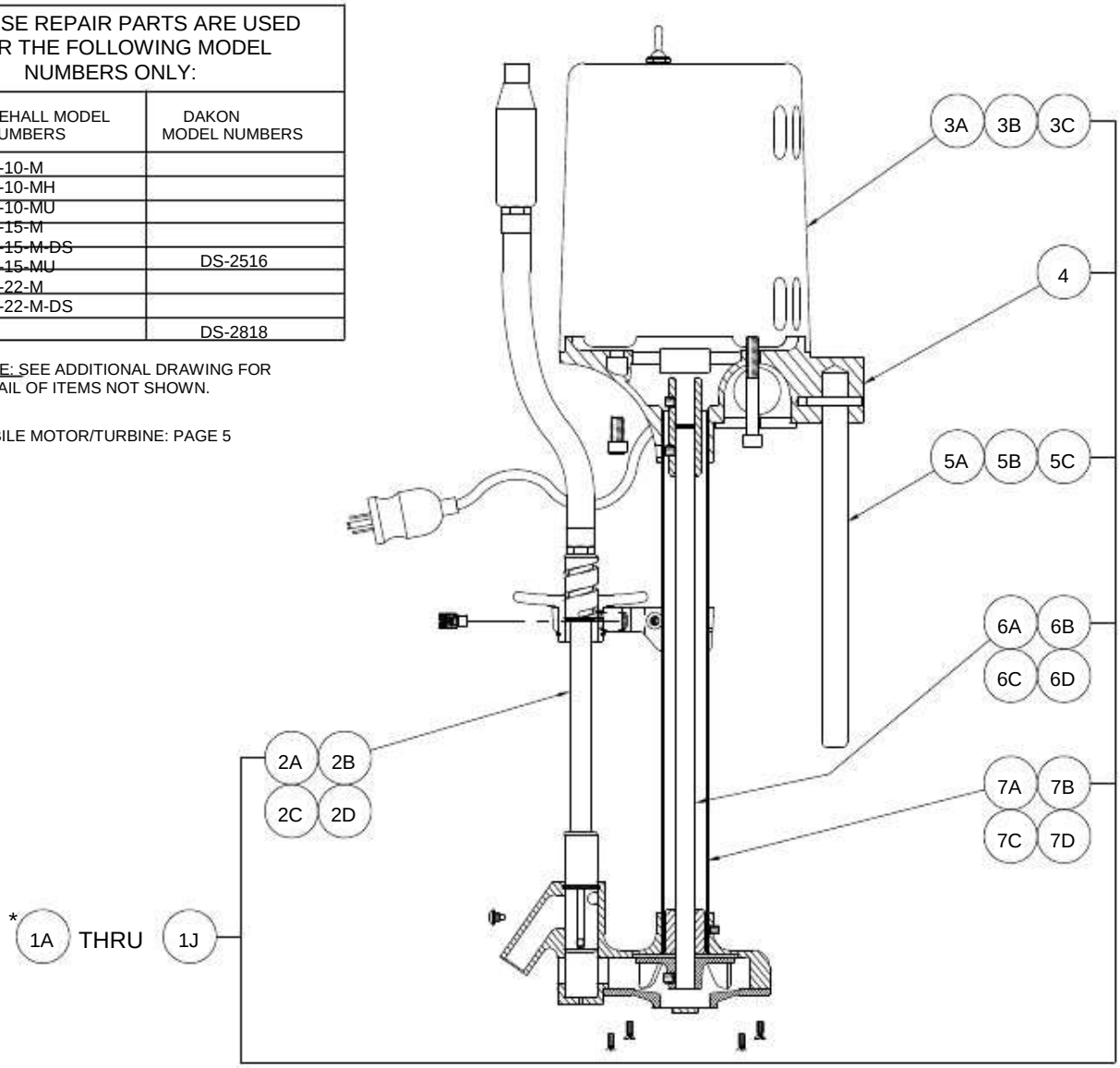
THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:	
WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
P-10-M	
P-10-MH	
P-10-MU	
P-15-M	
P-15-M-DS	
P-15-MU	DS-2516
P-22-M	
P-22-M-DS	
	DS-2818

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

MOBILE MOTOR/TURBINE: PAGE 5



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-002-001	TURBINE ASSY - P-10 - 115VAC, 60Hz	3B	6525-210-001	MOTOR ASSY - 230VAC, 60Hz - P-10/15/22
1B	6525-003-001	TURBINE ASSY - P-10 - 230VAC, 60Hz	3C	6525-220-001	MOTOR ASSY - 230VAC, 50Hz - P-10/15/22
1C	6525-004-001	TURBINE ASSY - P-10 - 230VAC, 50Hz	4	6525-500-199	3/4" MOTOR BASE CASTING
1D	6525-005-001	TURBINE ASSY - P-15 - 115VAC, 60Hz	5A	6509-555-199	3/4" DIA. x 11-1/2" ROD - P-10
1E	6525-006-001	TURBINE ASSY - P-15 - 230VAC, 60Hz	5B	6509-560-199	3/4" DIA. x 13" ROD - P-15
1F	6525-007-001	TURBINE ASSY - P-15 - 230VAC, 50Hz	5C	6509-565-199	3/4" DIA. x 16" ROD - P-22
1G	6525-008-001	TURBINE ASSY - P-22 - 115VAC, 60Hz	6A	6509-505-199	IMPELLER SHAFT - 13-7/8" - P-10
1H	6525-009-001	TURBINE ASSY - P-22 - 230VAC, 60Hz	6B	6509-510-199	IMPELLER SHAFT - 16-1/8" - P-15
1J	6525-010-001	TURBINE ASSY - P-22 - 230VAC, 50Hz	6C	6509-515-199	IMPELLER SHAFT - 19-1/8" - P-15-M-DS, P-22-M
2A	6525-552-001	PLUNGER ASSY - 9-1/2" - P-10-M	6D	6509-520-199	IMPELLER SHAFT - 22-1/8" - P-22-M-DS
2B	6525-555-001	PLUNGER ASSY - 12" - P-15-M	7A	6509-105-199	IMPELLER TUBE - 13" - P-10
2C	6525-558-001	PLUNGER ASSY - 15-1/4" - P-15-M-DS, P-22-M	7B	6509-110-199	IMPELLER TUBE - 15-1/4" - P-15
2D	6525-561-001	PLUNGER ASSY - 16-1/2" - P-22-M-DS	7C	6509-115-199	IMPELLER TUBE - 18-1/4" - P-15-M-DS, P-22-M
3A	6525-201-001	MOTOR ASSY - 115VAC, 60Hz - P-10/15/22	7D	6509-120-199	IMPELLER TUBE - 21-1/4" - P-22-M-DS

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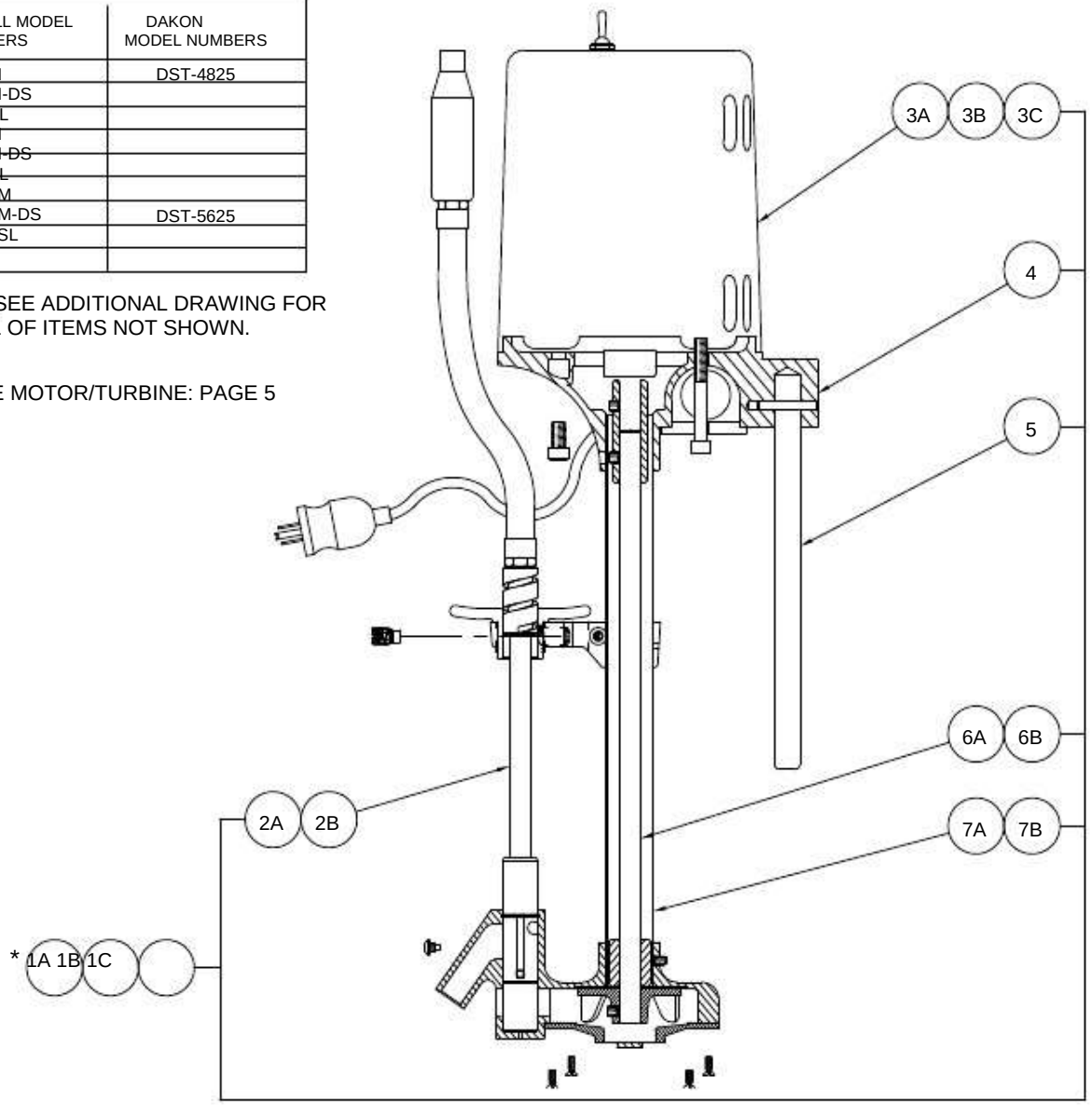
THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:	
WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
S-85-M	DST-4825
S-85-M-DS	
S-85-SL	
S-90-M	
S-90-M-DS	
S-90-SL	
S-110-M	
S-110-M-DS	DST-5625
S-110-SL	

* NOTE: SEE ADDITIONAL DRAWING FOR DETAIL OF ITEMS NOT SHOWN.

MOBILE MOTOR/TURBINE: PAGE 5



ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6525-065-001	TURBINE ASSY - S-85/90/110 - 115VAC, 60Hz	3C	6525-220-001	MOTOR ASSY - 230VAC, 50Hz
1B	6525-066-001	TURBINE ASSY - S-85/90/110 - 230VAC, 60Hz		46525-500-299	1" DIA. MOTOR BASE CASTING -M
1C	6525-067-001	TURBINE ASSY - S-85/90/110 - 230VAC, 50Hz		56509-160-199	1" DIA. x 21-1/4" ROD
2A	6525-565-001	PLUNGER ASSY - 20"	6A	6509-525-199	IMPELLER SHAFT - 26-3/8"
2B	6525-568-001	PLUNGER ASSY - 23-1/4" -DS	6B	6509-530-199	IMPELLER SHAFT - 29-3/8" -DS
3A	6525-200-001	MOTOR ASSY - 115VAC, 60Hz	7A	6509-125-199	IMPELLER TUBE - 25-1/2"
3B	6525-210-001	MOTOR ASSY - 230VAC, 60Hz	7B	6509-130-199	IMPELLER TUBE - 28-1/2" -DS

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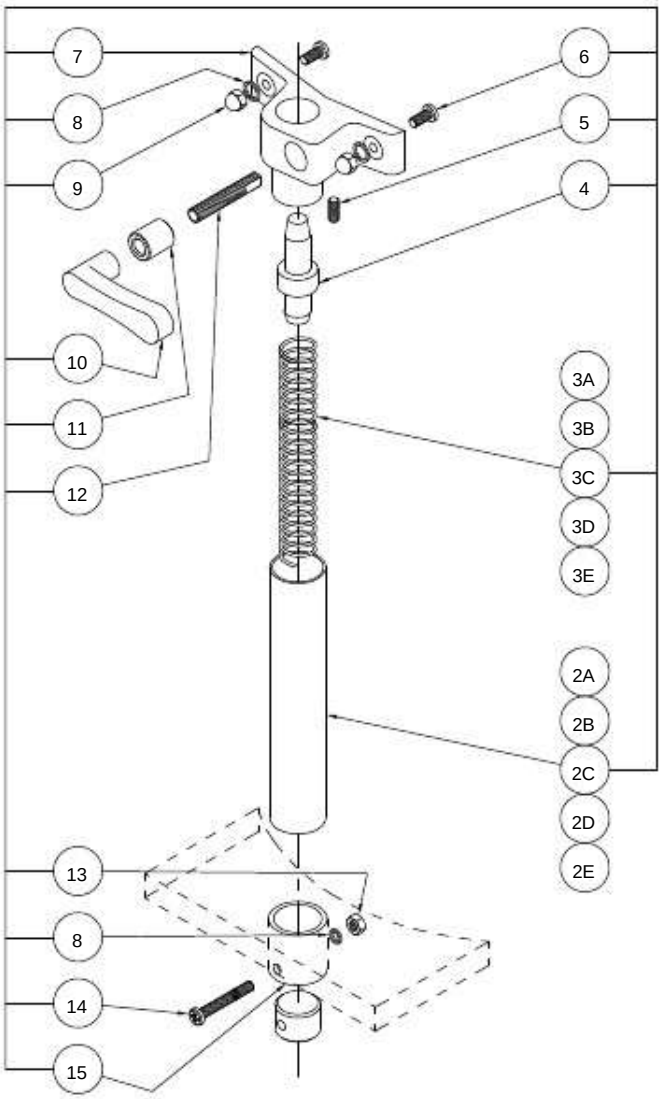
WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-27-M	
E-27-M-DS	DS-2821
E-27-M-SDP	DD-2821
E-45-M	
E-45-M-DS	
E-45-M-SDP	
H-60-M	
H-60-M-DS	
H-60-M-SDP	
H-75-M	
H-75-M-SDP	DS-3628
H-90-M	DD-3628
H-90-M-SDP	
H-105-M	
H-105-M-DS	
H-105-M-SDP	
	DST-4828
	DS-4828
	DD-4828



1A R & L ASSY FOR: E-27-M/-DS

1B R & L ASSY FOR: E-27-M-SDP

1C R & L ASSY FOR: E-45-M/-DS

1D R & L ASSY FOR: E-45-M-SDP

1E R & L ASSY FOR: H-60/75/90/105-M/-DS/-SDP

ITEM	PART NUMBER	DESCRIPTIONITEM		PART NUMBER	DESCRIPTION
1A	6530-230-001	1" DIA. R & L ASSEMBLY - E-27-M/-DS3E		6503-075-000	1-1/8" DIA. x 34" - SPRING - H-60/75/90/105-M
1B	6530-230-001	1" DIA. R & L ASSEMBLY - E-27-M-SDP4		6530-310-199	END CAP
1C	6530-240-001	1" DIA. R & L ASSEMBLY - E-45-M/-DS5		6502-411-000	SET SCREW
1D	6530-240-001	1" DIA. R & L ASSEMBLY - E-45-M6		6502-200-000	1/4"-20 x 5/8" TRUSS HEAD PHILLIPS MS
1E	6530-250-001	1" DIA. R & L ASSEMBLY - H-60/75/90/105-M7		6530-300-199	UPPER BRACKET
2A	6509-265-199	1-3/8" DIA. x 23-1/2" - TUBE - E-27-M/-DS8		6502-561-000	1/4" STAINLESS STEEL LOCKWASHER
2B	6509-270-199	1-3/8" DIA. x 25-3/8" - TUBE - E-27-M-SDP9		6502-520-000	1/4"-20 HIGH CROWN ACORN NUT
2C	6509-275-199	1-3/8" DIA. x 27-1/4" - TUBE - E-45-M10		6530-111-199	HANDLE
2D	6509-275-199	1-3/8" DIA. x 27-1/4" - TUBE - E-45-M-SDP11		6530-112-199	BUSHING
2E	6509-280-199	1-3/8" DIA. x 30-1/2" - TUBE - H-60/70/90/105-M 12		6530-114-199	3/8"-16 UNC STUD
3A	6503-060-000	1-1/8" DIA. x 23-1/2" - SPRING - E-27-M/-DS13		0302-005-000	1/4"-20 HEX NUT
3B	6503-065-000	1-1/8" DIA. x 27" - SPRING - E-27-M-SDP14		6502-105-000	1/4"-20 x 1-1/2" RND HD PHILLIPS MS
3C	6503-070-000	1-1/8" DIA. x 30-1/2" - SPRING - E-45-M/-DS15		6530-312-199	LOCKING STOP
3D	6503-075-000	1-1/8" DIA. x 34" - SPRING - E-45-M-SDP			

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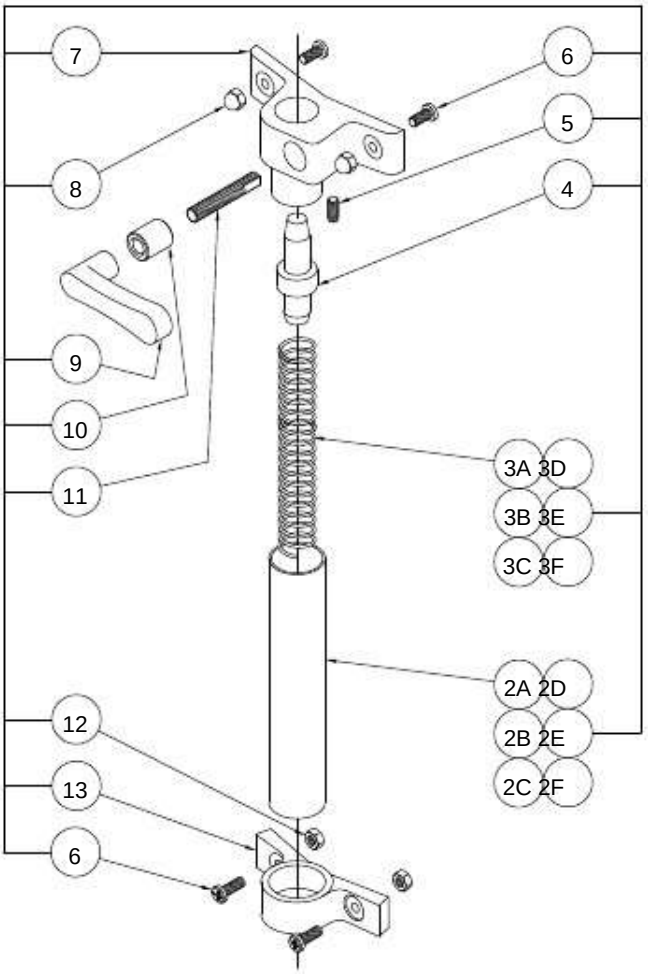
THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY:	
WHITEHALL MODEL NUMBERS	DAKON MODEL NUMBERS
E-27-S	DF-2821
E-36-S	DF-2825
E-45-S	DF-3225
H-60-S	DF-3628
H-75-S	
H-90-S	
H-105-S	
L-75-M	DF-4828
L-75-M-SDP	
L-75-SL	
L-75-S	
L-90-M	
L-90-M-DS	
L-90-M-SDP	
L-90-S	
L-90-SL	
L-105-M	DF-6018
L-105-M-DS	
L-105-M-SDP	
L-105-S	
L-105-SL	
S-85-M	
S-85-M-SDP	DF-6618
S-85-S	
S-85-SL	
S-90-M	DDT-4825
S-90-M-SDP	DFT-4825
S-90-S	
S-90-SL	
S-110-M	
S-110-M-SDP	
S-110-S	
S-110-SL	
	DST-5625
	DDT-5625
	DFT-5625



1A R & L ASSY FOR: E-27-S

1B R & L ASSY FOR: E-45-/S-85/90/110-S

1C R & L ASSY FOR: H-60/75/90/105-S

1D R & L ASSY FOR: L-75/90/105-S

1E R & L ASSY FOR: L-75/90/105-M/SL

1F R & L ASSY FOR: H-60/75/90/105-S

ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6530-220-001	1" DIA. R & L ASSY - E-27-S	3C	6503-075-000	1-1/8" x 34" SPRING - H-60/75/90/105-S
1B	6530-235-001	1" DIA. R & L ASSY - E-45/S-85/90/110-S	3D	6503-060-000	1-3/8" x 23-1/2" SPRING - L-75/90/105-S
1C	6530-245-001	1" DIA. R & L ASSY - H-60/75/90/105-S	3E	6503-055-000	1-18" x 19" SPRING - L-75/90/105-M/S
1D	6530-215-001	1" DIA. R & L ASSY - L-75/90/105-S	3F	6503-065-000	1-18" x 27" SPRING - S-58/90/110-M/SL
1E	6530-210-001	1" DIA. R & L ASSY - L-75/90/105-M/SL	4	6530-310-199	END CAP
1F	6530-225-001	1" DIA. R & L ASSY - E-45-SL/S-85/90/110-M/SL	5	6502-411-000	SET SCREW
2A	6509-265-199	1-3/8" DIA. x 23-1/2" TUBE - E-27-S	6	6502-200-000	1/4"-20 x 5/8" TRUSS HEAD PHILLIPS MS
2B	6509-275-199	1-3/8" DIA. x 27-1/4" TUBE - E-45/S-85/90/110-S	7	6530-300-199	UPPER BRACKET
2C	6509-280-199	1-3/8" DIA. x 30-1/2" TUBE - H-60/75/90/105-S	8	6502-520-000	1/4"-20 HIGH CROWN ACORN NUT
2D	6509-260-199	1-3/8" DIA. x 21-1/4" TUBE - L-75/90/105-S	9	6530-111-199	HANDLE
2E	6509-255-199	1-3/8" DIA. x 18-1/2" TUBE - L-75/90/105-M/S	10	6530-112-199	BUSHING
2F	6509-270-199	1-3/8" DIA. x 18-1/2" TUBE - S-85/90/110-M/SL	11	6530-114-199	STUD
3A	6503-265-000	1-1/8" x 23-1/2" SPRING - E-27-S	12	0302-005-000	1/4"-20 HEX NUT
3B	6503-070-000	1-1/8" x 30-1/2" SPRING - E-45/S-85/90/110-S	13	6530-301-199	LOWER BRACKET

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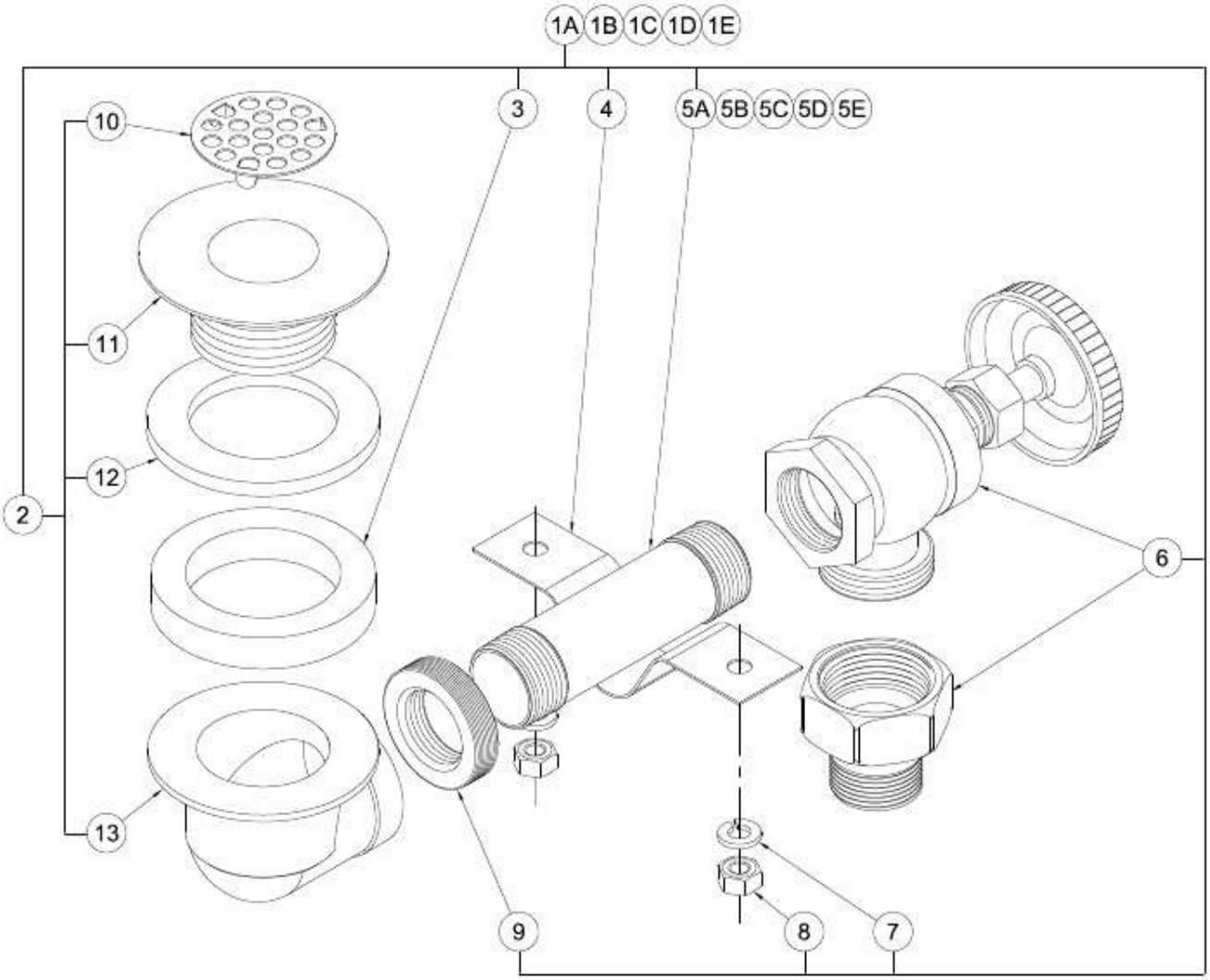
COMPLETE ASSEMBLY



1A DRAIN VALVE ASSY FOR: P-10-M/MH/MU, P/E-15-M/MU, E-22-MU, S-85/90-M/SL

1B DRAIN VALVE ASSY FOR: P/E-22-M, E-27/45-M

1C DRAIN VALVE ASSY FOR: H-60/75/90-M

1D DRAIN VALVE ASSY FOR: H-105-M

1E DRAIN VALVE ASSY FOR: L-75/90/105-M/SL, S-110-M/SL

ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6508-095-001	DRAIN VALVE ASSEMBLY w/ 3-1/2" NIPPLE	5D	6508-130-000	3/4" NPT PIPE NIPPLE x 8-1/2" LONG
1B	6508-096-001	DRAIN VALVE ASSEMBLY w/ 4-1/2" NIPPLE	5E	6508-132-000	3/4" NPT PIPE NIPPLE x 9-1/2" LONG
1C	6508-097-001	DRAIN VALVE ASSEMBLY w/ 6-1/2" NIPPLE	66	512-000-000	DRAIN VALVE w/ NPT OUTLET
1D	6508-098-001	DRAIN VALVE ASSEMBLY w/ 8-1/2" NIPPLE	70	337-050-000	1/4" STAINLESS STEEL LOCKWASHER
1E	6508-099-001	DRAIN VALVE ASSEMBLY w/ 9-1/2" NIPPLE	80	302-005-000	1/4"-20 UNC STN. STL. HEX NUT
2	6508-060-001	ELBOW & STRAINER ASSEMBLY	96	508-063-199	1-1/2" ELL TO 3/4" NPT ADAPTER
3	6504-503-199	STANDOFF SPACER	106	508-061-000	DRAIN STRAINER
4	6508-061-199	PIPE STRAP	116	508-064-199	TRHEADED DRAIN, CHROME PLATED
5A	6508-115-000	3/4" NPT PIPE NIPPLE x 3-1/2" LONG	126	508-065-000	WASHER
5B	6508-118-000	3/4" NPT PIPE NIPPLE x 4-1/2" LONG	136	508-062-000	CAST BRASS ELBOW
5C	6508-124-000	3/4" NPT PIPE NIPPLE x 6-1/2" LONG			

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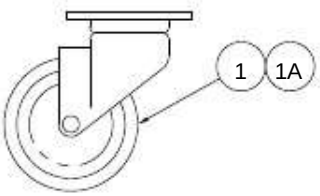
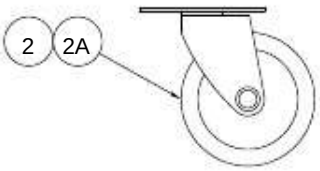
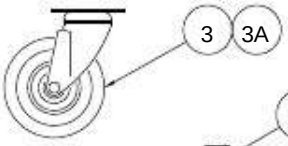
MODEL NUMBERS MODEL NUMBERS
H-60-M
H-75-M
H-90-M
H-105-M
L-75-M
L-90-M
L-105-M
S-85-MDST-4825
S-90-M
S-110-MDST-4825

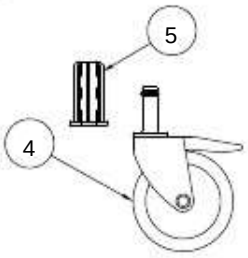




THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY: WHITEHALLDAKON
MODEL NUMBERS MODEL NUMBERS
E-27-M
E-45-M

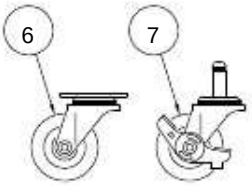
THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY: WHITEHALLDAKON
MODEL NUMBERS MODEL NUMBERS
P-10-M
P-10-MH
P-15-M
P-15-MH
P-22-M
E-15-M
E-15-MH
E-22-M

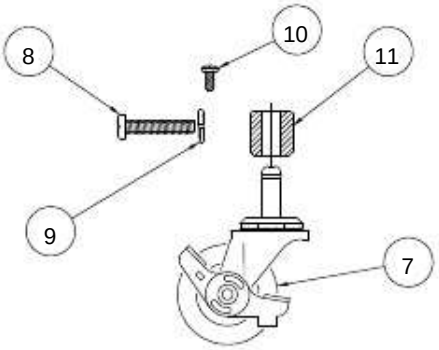




THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY: WHITEHALLDAKON
MODEL NUMBERS MODEL NUMBERS
E-22-MU

THESE REPAIR PARTS ARE USED FOR THE FOLLOWING MODEL NUMBERS ONLY: WHITEHALLDAKON
MODEL NUMBERS MODEL NUMBERS
P-10-MU
P-15-MU
E-15-MU





ITEM PART NUMBER	DESCRIPTIONITEM PART NUMBER			DESCRIPTION
16507-013-000	4" DIA. HEAVY DUTY CASTER56507-025-000			CASTER TUBE INSERT
1A6507-063-000	4" DIA. HEAVY DUTY CASTER w/ BRAKE66507-005-000			2" DIA. LIGHT DUTY CASTER
26507-003-000	4" DIA. MEDIUM DUTY CASTER76507-002-000			2" DIA. LIGHT DUTY CASTER w/ STEM/BRAKE
2A6507-053-000	4" DIA. MEDIUM DUTY CASTER w/ BRAKE86502-005-000			1/4"-20 x 1-3/8" UNC RND HEAD SLOT
36507-014-000	3" DIA. LIGHT DUTY CASTER90337-050-000			1/4"STAINLESS STEEL LOCKWASHER
3A6507-064-000	3" DIA. LIGHT DUTY CASTER w/ BRAKE106502-100-000			#8-32 x 3/8" UNC PAN HEAD PHILLIPS
46507-050-000	3" DIA. LIGHT DUTY CASTER w/ STEM/BRAKE 116520-903-199			TUBING CASTER PLUG

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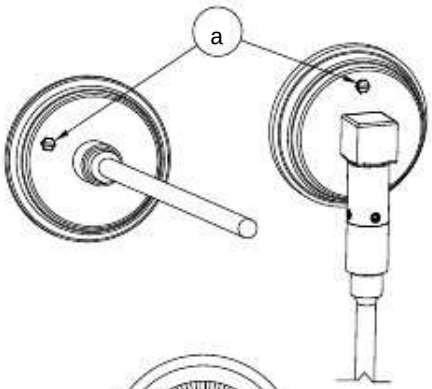
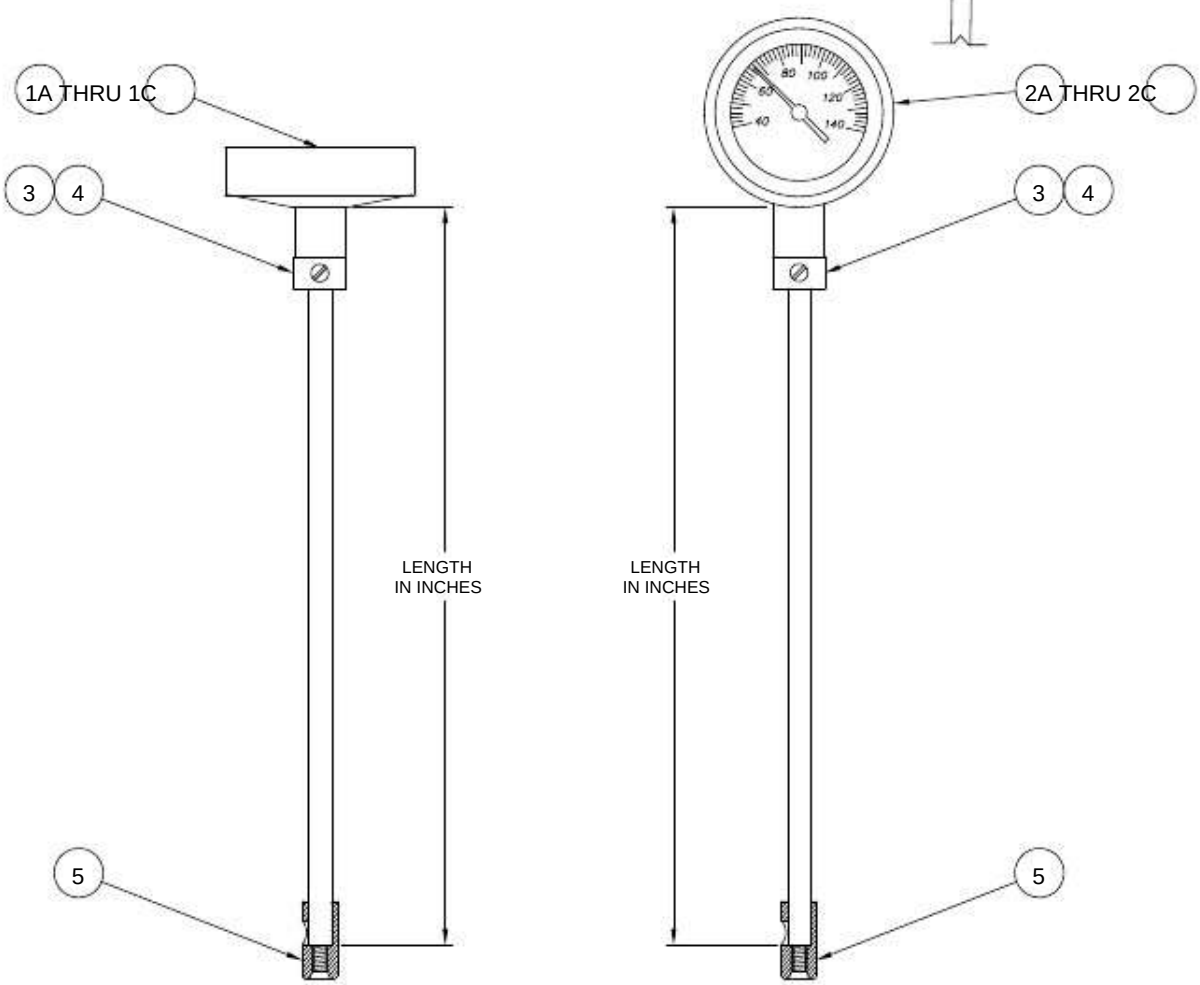
NOTE: THE THERMOMETER GAUGES TEMPERATURES FROM 40° TO 140° F. DO NOT ALLOW TEMPERATURES TO EXCEED 140° TO AVOID DAMAGING THE THERMOMETER.

TO RECALIBRATE: IMMERSE THE STEM A MINIMUM OF 4" INTO THE WATER TURN ON THE TURBINE ASSEMBLY AND ANOTHER ACCURATE TEMPERATURE GAUGE TO COMPARE AND USE THE EXTERNAL ADJUSTMENT SCREW PROVIDED ON THE THERMOMETER CASING AS INDICATED a .





BACK CONNECTED THERMOMETER

AVAILABLE IN 12", 15" & 18" LENGTHS

BOTTOM CONNECTED THERMOMETER

AVAILABLE IN 21", 25" & 28" LENGTHS

ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1A	6532-005-000	BACK CONNECTED THERMOMETER 12"	2C	6532-080-000	BOTTOM CONNECTED THERMOMETER 28"
1B	6532-010-000	BACK CONNECTED THERMOMETER 15"	36	502-451-000	#10-32 x 1/4" PAN HD SLOTTED NYLON SCREW
1C	6532-015-000	BACK CONNECTED THERMOMETER 18"	46	532-100-199	UPPER THERMOMETER BRACKET
2A	6532-070-000	BOTTOM CONNECTED THERMOMETER 21"	56	532-101-199	LOWER THERMOMETER BRACKET
2B	6532-075-000	BOTTOM CONNECTED THERMOMETER 25"			

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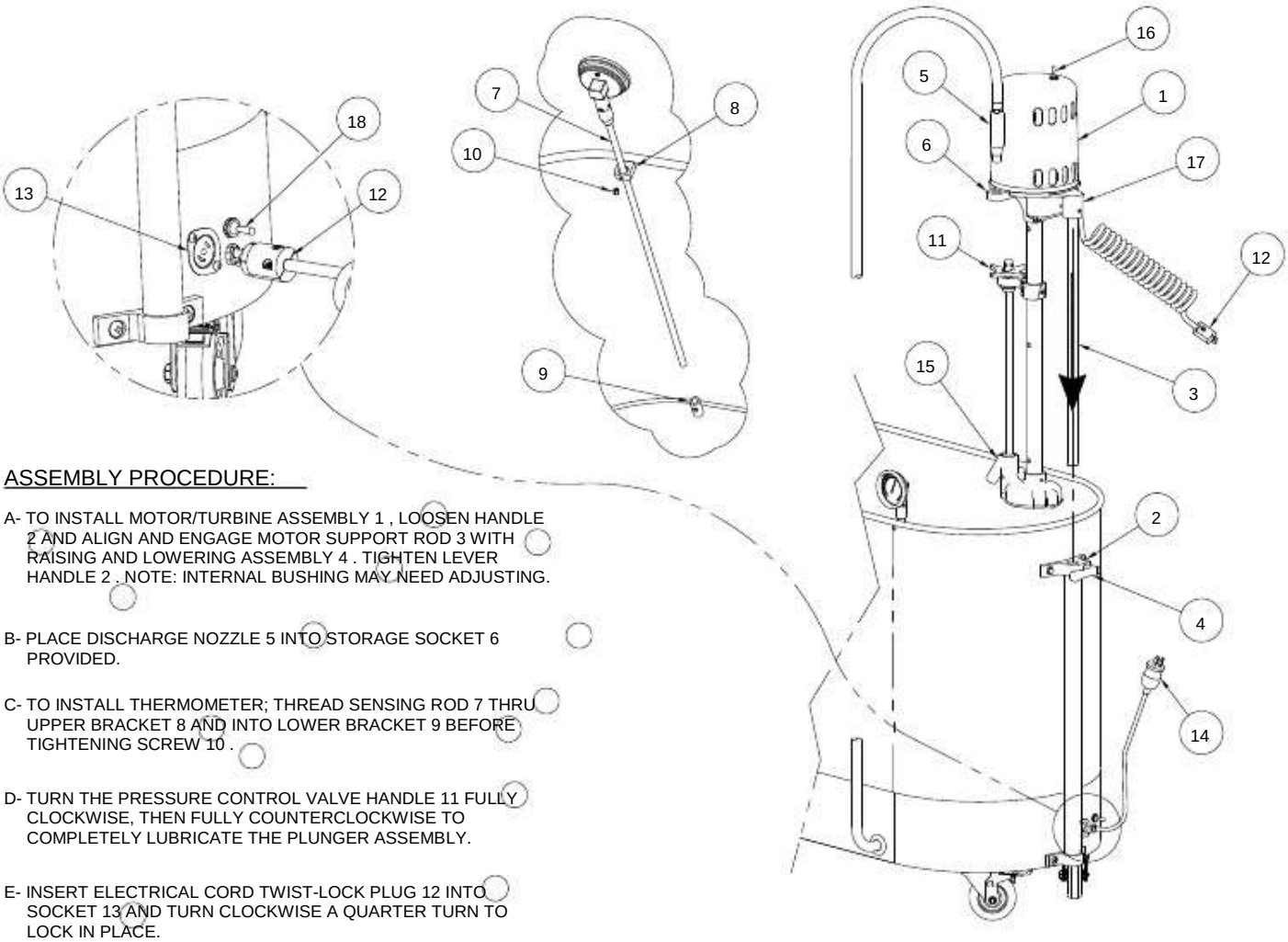

ASSEMBLY PROCEDURE:

A- TO INSTALL MOTOR/TURBINE ASSEMBLY 1 , LOOSEN HANDLE 2 AND ALIGN AND ENGAGE MOTOR SUPPORT ROD 3 WITH RAISING AND LOWERING ASSEMBLY 4 . TIGHTEN LEVER HANDLE 2 . NOTE: INTERNAL BUSHING MAY NEED ADJUSTING.

B- PLACE DISCHARGE NOZZLE 5 INTO STORAGE SOCKET 6 PROVIDED.

C- TO INSTALL THERMOMETER; THREAD SENSING ROD 7 THRU UPPER BRACKET 8 AND INTO LOWER BRACKET 9 BEFORE TIGHTENING SCREW 10 .

D- TURN THE PRESSURE CONTROL VALVE HANDLE 11 FULLY CLOCKWISE, THEN FULLY COUNTERCLOCKWISE TO COMPLETELY LUBRICATE THE PLUNGER ASSEMBLY.

E- INSERT ELECTRICAL CORD TWIST-LOCK PLUG 12 INTO SOCKET 13 AND TURN CLOCKWISE A QUARTER TURN TO LOCK IN PLACE.

F- PROVIDE ELECTRICAL SERVICE AND PROPERLY INSTALLED, GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FOR MOTOR SPECIFIED. MOTOR SPECIFICATIONS AVAILABLE ARE EITHER 120V AC / 60 HZ ON 15A CIRCUIT OR 240 V AC / 50 HZ ON 10A CIRCUIT.

⚠ WARNING

Turbine assembly is provided with a 3-way plug. The third prong functions as a built-in ground and must be plugged into a matching grounded receptacle to properly ground the product.

G- PLUG IN THE CORD 14 FOR THE MOTOR ASSEMBLY 1 TO THE RECEPTACLE.

OPERATION:

A- FILL TUB AS DESIRED USING 3/4" NPS X 60" LONG FILLER HOSE PROVIDED. WATER LEVEL SHOULD BE A MAXIMUM OF 4" BELOW THE RIM AND A MINIMUM OF 6" ABOVE BOTTOM OF PUMP 15 .

B- TURN THE PRESSURE CONTROL VALVE HANDLE 11 FULLY CLOCKWISE. THIS PROVIDES MAXIMUM PRESSURE AND AGITATION.

C- TURN ON THE SWITCH 16 .

D- ADJUST RAISING AND LOWERING ASSEMBLY 4 BY SLOWLY PUSHING DOWN ON THE TOP OF THE MOTOR SUPPORT CASTING 17 UNTIL THE PUMP IS AT THE DESIRED LOCATION AND TIGHTEN HANDLE 2 TO FIX.

E- ADJUST PRESSURE CONTROL VALVE 11 TO DELIVER DESIRED LEVEL OF AGITATION AND PRESSURE.

DRAINING PROCEDURE:

A- PLACE DISCHARGE NOZZLE 5 INTO FLOOR DRAIN OR SINK.

B- TURN ON DRAIN PUMP SWITCH 18 . NOTE: WHEN WATER STOPS DISCHARGING FROM THE NOZZLE, TURN OFF THE SWITCH.

C- WHEN DRAINING INTO SINK, ANY RESIDUAL WATER REMAINING MAY BE REMOVED BY SPONGE DRYING.

D- REPLACE DISCHARGE NOZZLE 5 INTO SOCKET 6 .

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Cleaning and Disinfecting the Whirlpool

After draining the Whirlpool:

1. Verify that the turbine is OFF.
2. Remove any loose objects or debris that may be present in whirlpool.
3. To Disinfect:

   *Whitehall recommends that you disinfect the whirlpool after each patient.

   *Spray or wipe all surfaces of the whirlpool tank and thermometer with a hard surface disinfectant, following the disinfectant manufacturer's instructions.

   *Rinse away disinfectant residue with warm, clean water. If needed (or after the last patient of the day) wipe the inside and outside surfaces of the whirlpool with a towel to reduce streaking and spotting.

4. To Clean:

   *Clean as needed, or weekly at minimum.

   *Hand-wash all surfaces of the whirlpool and thermometer with a non-abrasive stainless steel cleaner. Scrub only in the direction of the polish lines on the whirlpool. Follow the manufacture's instructions for use.

   *Rinse with cold water.

   *Wipe inside and outside surfaces with a towel to reduce streaks and spotting.

Disinfecting and Cleaning of the Turbine

1. Drain the tank.
2. Place an empty bucket beneath the turbine. Fill with water and add disinfectant solution per manufacturers recommended use.
3. Turn the control valve to the slow position.
4. Turn on the turbine for 5 seconds and turn it off. Allow the turbine to soak for a 10 minute contact time.
5. Spray or wipe all exposed surfaces with a mixture of suitable disinfectant solution per manufacture's recommended use. Exposed surfaces should remain wet for at least 10 minutes.
6. Drain the turbine bucket into the tank and open drain.
7. Rinse all exposed surfaces with warm/hot water.
8. Fill the bucket with water and run turbine for five seconds to rinse impeller cavity.

Important

The following chemicals are NOT recommended:

Ÿ Sodium or calcium hypochlorite, chlorines, or bleach: Chloride ions are a major cause of stainless steel pitting and are highly caustic and corrosive. If used, wear skin, eye and respiratory protection. Immediately rinse off residue.

Ÿ Phenolics: Phenolics damage metal parts and plastics and distort the water-lubricated hard-rubber bearing in turbine. DO NOT USE.

Ÿ Glutaraldehydes: These chemicals are good disinfectants but poor cleaners. Exposure to vapors is harmful. DO NOT USE.

Ÿ Iodines: Iodines are good disinfectants but poor cleaners. Iodines corrode metal surfaces including stainless steel. If used wear respiratory protection. Immediately rinse off residue.

Ÿ Alcohol: Alcohol-based cleaners have limited effectiveness against some common microorganisms. They are also extremely flammable and corrosive. DO NOT USE.

Important

Using abrasive compounds or applicators can damage the whirlpool's appearance. Do not use abrasive materials to clean the whirlpool.

*Whitehall recommends the use of Hydrochlor® Whirlpool Antiseptic with all patient treatments. This simplifies cleaning of equipment by eliminating need for repeated rinsing and scrubbing.

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CARE AND CLEANING OF STAINLESS STEEL

NORMAL CLEANING

Clean weekly or more often, as needed (especially high-polish surfaces)

RECOMMENDED CLEANING MATERIALS

Ÿ Sponge - natural or artificial
Ÿ Nylon or other soft-bristle material brush
Ÿ SOFT cloth (as used on automobile finishes)

RECOMMENDED CLEANING SOLUTIONS

Ÿ Hand dishwashing liquid/soft water solution

Ÿ Mild soap/soft water solution

Ÿ 3M Stainless Steel Cleaner/Polish

Ÿ White vinegar/soft water solution (for brightening, removing oil deposit and hard water deposits)

Ÿ CLR Brand Cleaner or baking soda /soft water solution (for brightening, removing hard water deposits)

Ÿ Club soda and sponge

To remove smudges and fingerprints:
Wipe surfaces with a quality Stainless Steel Cleaner / Polish. Apply using a soft non-abrasive cloth. Always follow cleaner/polish product directions provided.

To remove dirt and debris:
Wash surfaces with a mild liquid soap. Apply using a soft, non-abrasive cloth. Rinse surfaces thoroughly with clean water. Afterwards, using a soft non-abrasive cloth, wipe surfaces with stainless steel cleaner/polish.

To remove rust stains:
Wipe surfaces with CRES (available through Whitehall) or equivalent cleaner. Use recommended solutions. Apply using a soft non-abrasive sponge. Rinse surfaces thoroughly immediately after application. Always follow cleaner product directions provided. Afterwards, using a soft, non-abrasive cloth, wipe surfaces with stainless steel cleaner/polish.

FOR TOUGH PROBLEMS

Ÿ CRES Cleaner specifically for rust stains (Available through Whitehall)
Ÿ Tarn-X for general stains
Ÿ # 7 chrome polish
Ÿ Silver polish

To remove stubborn spots or to treat a scratch (Standard Satin Finish only):
Use of synthetic, abrasive, general-purpose pads such as Scotch Brite® is recommended. Apply the stainless steel cleaner/polish to the synthetic, abrasive pads and

To remove stubborn spots or to treat a scratch (Standard Satin Finish only): Continued:
CAREFULLY rub out spot with cleaner/polish. Be sure to rub in the direction of the grain! Do not allow steel wool to come in contact with stainless steel. Steel particles can embed into the stainless steel surface and create rust!

> Special Note: After cleaning for serious problems, let dry, and expose to air for at least 24 hours to allow "healing" (restoring of the chromium oxide layer) of the stainless steel surface.

FOR ENVIRO-GLAZE STAINLESS STEEL

Protecting the powder coated surface is the major key in keeping an Whitehall Enviro-Glazed stainless steel product clean and under warranty.

Ÿ For normal wipe-down cleaning, a mild soap and a sponge or cotton cloth will perform well.

Ÿ Ordinary mild cleaners for home use will sanitize the fixture. (eg. Soft-Scrub®, Comet Soft Cleanser®, Clorox®, Scrubbing Bubbles® Gel.)

Ÿ NEVER use harsh cleansers such as "Kaboom®", Lysol® Gel, Lysol Cling® or "The Works" as these contain powerful acidic or alkaline chemicals which may damage the finish or even the metal of the tank itself. Use of such chemicals will void the warranty.

Ÿ NEVER use a metal brush while cleaning. The use of such a tool at any time will scratch the finish and perhaps cause corrosion, voiding the warranty.

THINGS TO AVOID

Ÿ Harsh polishing cleanser (Comet, Bon Ami, etc.)

Ÿ Harsh chemicals (strong acidic or alkaline materials such as hydrochloric acid, sodium hydroxide, etc.)

Ÿ Any abrasive substance (dirt/mud, ceramic items, etc.)

Ÿ Chlorinated cleansers, sanitizers or bleach of any kind

Ÿ Steel wool, steel utensils or any object made of steel or metal, left in contact with stainless surface (hair pins, paper clips, aerosol cans)

Ÿ Scotch-Brite® type pads on high-polished surfaces

Ÿ Seawater or excessively hard water

Ÿ Salt or salty foods allowed to dry on surface

Ÿ Leaving scratches in metal surface (soil can collect in these, preventing surface from "healing")

Ÿ Leaving hard water sitting (evaporating) for extended periods, allowing mineral deposits to collect.

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Maintenance Schedule

The whirlpool requires regular maintenance. Set up and follow a maintenance schedule. The table at right represents minimum intervals for maintenance.

When using maintenance products, follow the manufacturers' directions and read the manufacturer's MSDS, Material Safety Data Sheets. You can purchase a recommended disinfectant from Whitehall Customer Service (Back of Manual) or your Whitehall distributor.

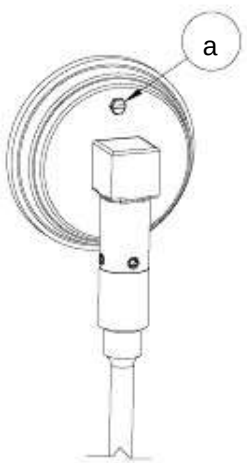
Maintenance Procedures

Motor:
Motors are equipped with sealed greased ball bearings that do not require lubrication. Vent holes in the motor and motor cover shell must be cleaned periodically to allow free air flow and prevent overheating.

Hard Water:
The mineral properties of hard water, if allowed to build up over a period of time, have the potential for creating damage to the moving parts of the turbine assembly. We recommend the installation of a water softener or if that is not possible, the use of a water softening agent.

Note: The thermometer gauges temperatures from 40° to 140° F. Do not allow temperatures to exceed 140° to avoid damaging the thermometer.

To recalibrate: Immerse the stem a minimum of 4" into the water turn on the turbine assembly and another accurate temperature gauge to compare and use the external adjustment screw provided a on the thermometer casing as indicated.



Troubleshooting

When there is a significant loss in pressure at the turbine assembly:

Ÿ Check water inlet holes underneath the pump, clean away any foreign material.

Ÿ Add water, pump body must be completely submerged.

Motor does not start when switch is turned on:

Ÿ Check your power source.

Ÿ Have a qualified technician check switch.

Motor ceases operation:

Ÿ Check for motor overloads: Possible causes are:

A- Blocked motor ventilation holes

B- Excessive current load

NOTE: The motor is equipped with an overload protector. In an overheated condition, the motor will automatically shut off until it has returned to a normal operating temperature.

Minimum Maintenance Intervals	Each Use	As Needed	Each Week	Each Month
Disinfecting (page 17)	●			
Cleaning (page 18)		●	●	
Inspecting (page 2)		●		●

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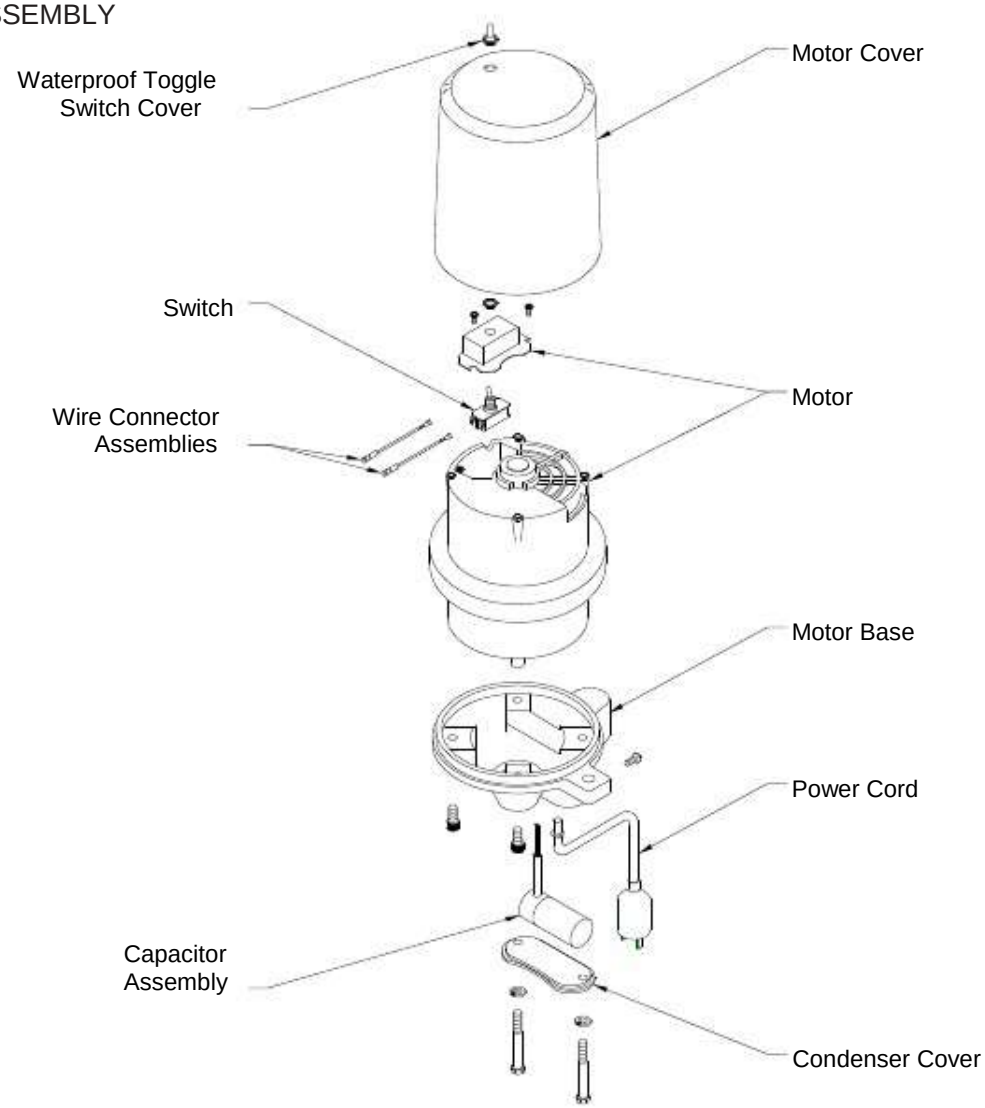
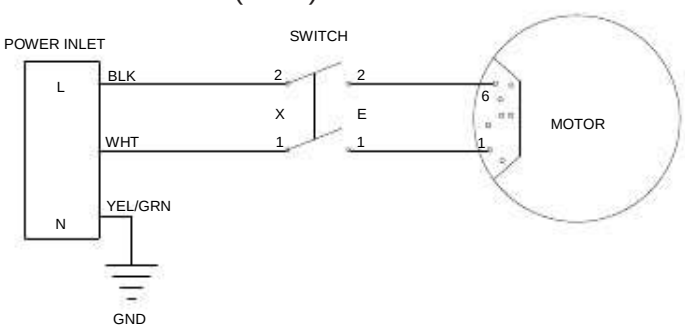
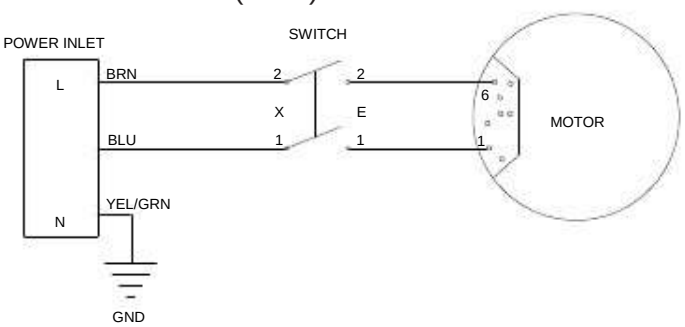
MOTOR DISASSEMBLY



SWITCH WIRING (115V)



SWITCH WIRING (230V)



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Any questions regarding servicing of products in Europe or the Middle East should be directed to:
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Phone 358 9 615 00 540 • Fax 358 9 615 00 545
Web www.nivamedical.fi • E-mail info@nivamedical.fi

EC REP

CE 0537

MANUFACTURER'S WARRANTY

Whitehall Manufacturing Company warrants that its products are free from defects in material or workmanship under normal use and service for a period of one year from date of shipment. Whitehall's liability under this warranty shall be discharged solely by replacement or repair of defective material, provided Whitehall is notified in writing within one year from date of shipment, F.O.B. Industry, California.

This warranty does not cover installation or labor charges, and does not apply to materials which have been damaged by other causes such as mishandling or improper care or abnormal use. The repair or replacement of the defective materials shall constitute the sole remedy of the Buyer and the sole remedy of Whitehall under this warranty. Whitehall shall not be liable under any circumstances for incidental, consequential or direct charges caused by defects in the materials, or any delay in the repair or replacement thereof. This warranty is in lieu of all other warranties expressed or implied. Product maintenance instructions are issued with each fixture, and disregard or non-compliance with these instructions will constitute an abnormal use condition and void the warranty. Stainless steel must be protected on jobsites during construction and must be properly maintained after the water has been introduced into the fixture, or Whitehall's limited warranty is void. If you have any questions or require technical assistance, please call 800-743-8219.

NOTICE TO KEEP ORIGINAL PACKAGING- Regarding warranty claims: customer must retain original packaging for one year upon receipt of product. If packaging is discarded, it is the customer's responsibility to provide adequate packaging. Any shipping claims that are a direct result of customer-provided packaging materials will be handled by the shipper.